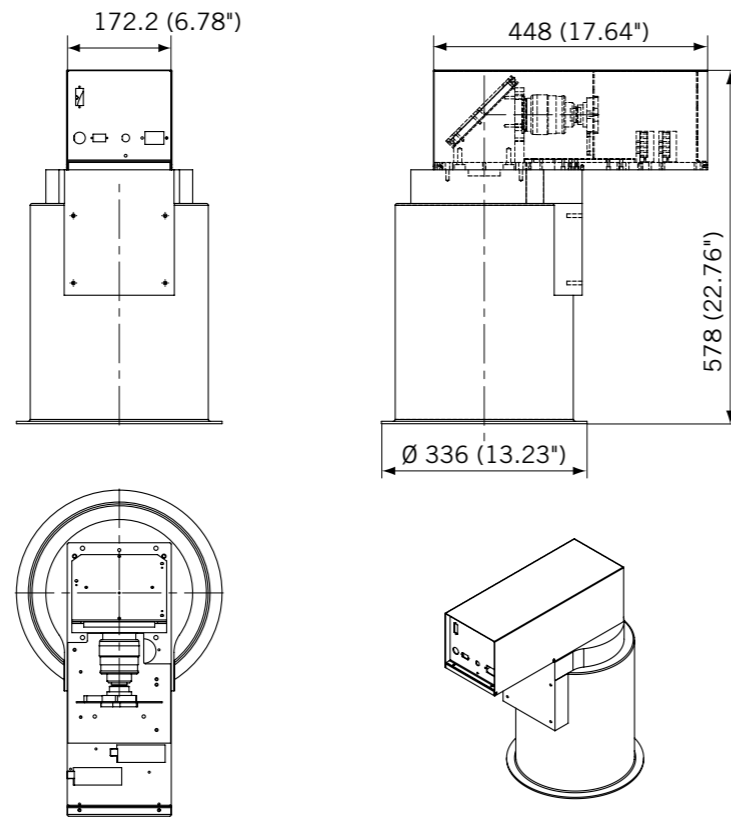


Dimensions VISTALUX 9S3-HR



Standard Delivery Scope

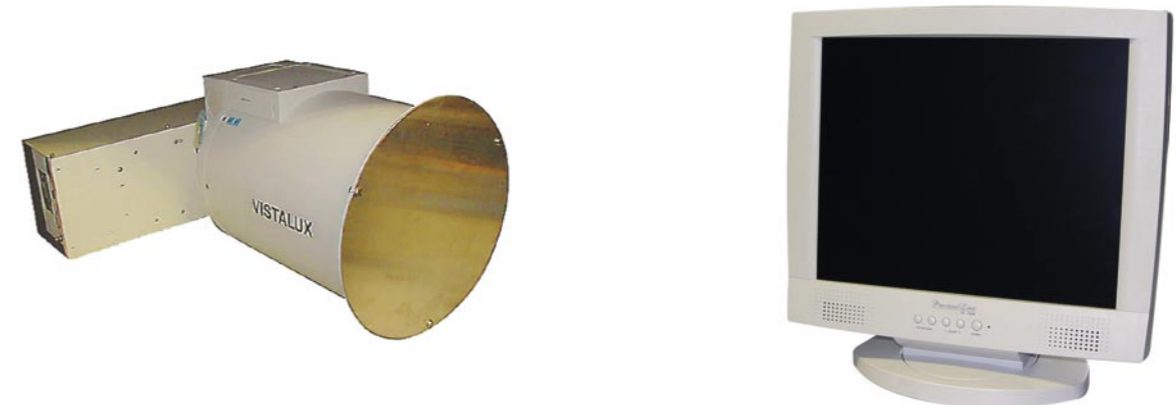
- X-ray image intensifier RBV23-3M (tube size 9")
- HR camera, type HiRes-XR
- Camera holder for HR camera
- Objective 35 mm with C-mount adapter
- Tandem optic with first surface mirror
- High quality RODENSTOCK- lens for the tandem optic
- TFT monitor, 19" screen size
- Camera-link cable, 10 m

Options

- Mounting plate for image intensifier
- Monitor support, tiltable, to be mounted to radioscopic cabinet, incl. supporting frame
- Stand for monitor support
- Repeater for cable extension

SEIFERT VISTALUX 9S3-HR

Image intensifier with high definition digital camera



General

The high definition image intensifier digital camera system is used as a converter of X-rays into a VGA video image.

A high definition camera accomplishes the conversion of the optical image at the output screen of the image intensifier into digital video signal. The digital signal is displayed by means of a PC based data acquisition.

The high technical standard of the TFT screen guarantees a reliable continuous operation even in case of toughest application circumstances. Additional protection by safety glass.

• Image Intensifier

- High detail resolution
- Large image contrast
- High radiation sensitivity
- Low inherent filtration
- Long life and high stability
- Mechanically insensitive due to all-metall ceramic technology

• HR - Video Camera

- High quality image at high spatial and contrast resolution and wide dynamic range
- Excellent modulation transfer function (MTF)
- Long life and high stability
- High resistance to electro-magnetic interferences
- Precise image geometry
- Real-time ability

• TFT - Screen

- High detail resolution at large viewing angles
- High luminance
- Best contrast resolution
- No flickering by CCIR interlaced read-out

- Produced under ISO 9001 certified quality management system

Technical Data

Image Intensifier

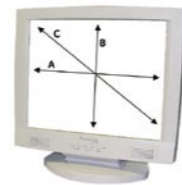
Tube type	RBV 23-3M (all-metal ceramic design)
Nominal input diameter	230 mm (9.1"), (IEC 520, DIN 6825)
Useful input image	215 mm (8.5")
<small>(Maximum diameter of object projection in the input plane of the image intensifier housing at a focus-image distance of 1 m (39.4"))</small>	
Input field with electronic zoom (mm (inch))	170 mm (6.7") / 130 mm (5.1") (Zoom 1 / 2)
Diameter of output image	25 mm
Input window	Al
Operating temperature	+5°C to +40°C (+41°F to +104°F)

Typical image transfer characteristics

	Normal	Zoom 1	Zoom 2
Input field size [mm (inch)]	215 (8.5)	170 (6.7)	130 (5.1)
Viewable input screen area at the monitor screen			
in [mm (inch)], horizontal (A)	ca. 195 (7.7)	ca. 145 (5.7)	ca. 120 (4.7)
vertical (B)	ca. 152 (6.0)	ca. 115 (4.5)	ca. 90 (3.5)
diagonal (C)	ca. 210 (8.3)	ca. 165 (6.5)	ca. 130 (5.1)
Visual minimum resolution (center)*			
Image intensifier only ** [LP/mm]	5.2	5.8	6.4
Total system [LP/mm]	2.2	2.5 - 2.8	3.4
Total system with additional digital zoom [LP/mm]	2.5	2.8 - 3.1	3.7

Conversion factor	$\frac{cd \cdot s}{m^2 \cdot \mu Gy}$	>17	>17	>17
	$\frac{cd \cdot s}{m^2 \cdot mR}$	>148	>148	>148

Weight (incl. camera and holder) 21 kg (36 kg), 46.3 lbs (79.3 lbs)



* 100 µm lead test pattern directly at the input, radiation quality max. 60 kV without filter
 ** Visual resolution is measured with a microscope at the image intensifier output directly

HR-Camera Type HiRes-XR

Sensor	Interline Transfer CCD progressive scan with micro lenses
Number of Picture Elements	1004 x 1004 (horizontal x vertical)
Size of Picture Elements	7.4 µm x 7.4 µm
Light-Sensitive Area	7.4 x 7.4 mm (2/3")
Quantum Efficiency	max. 42% at 490 nm
Spectral Sensitivity	300 nm to 1000 nm
Full Well Capacity	42000e-
A/D-Conversion	12 Bit
Readout Noise	50e-rms
Signal/Noise Ratio	63 dB (measured in dark image 40 ms and 0 dB gain)
Bad Pixel Compensation	max. 7 pixel
Frame Rate	25 fps
Video output	Camera Link (max. cable length 10 m or repeater necessary)
Camera Control Interface	RS232, digital I/Os via optocoupler and TTL
Lens Mount	C-Mount
CCD position accuracy	+/- 5 Pixel
Operating Temperature	-20°C to +60°C (-4°F to +140°F)
Power Supply	230 V ±10%, 50/60 Hz

Spatial resolution of the system without geometric magnification:

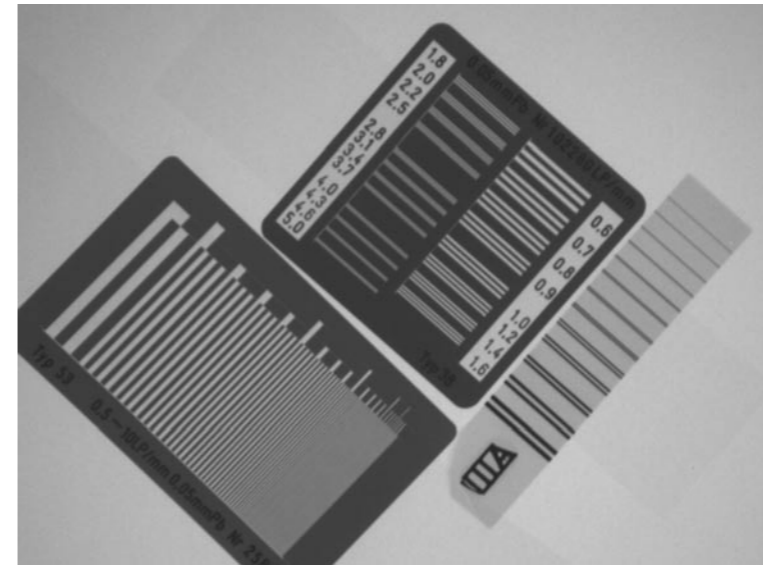


Image quality indicator (IQI) at Zoom 0:

- Pt-Duplex wire (EN 462-5): D8
- Line pair pattern: 2.2 Lp/mm

Remark:
Quality of illustration differs from original image quality!

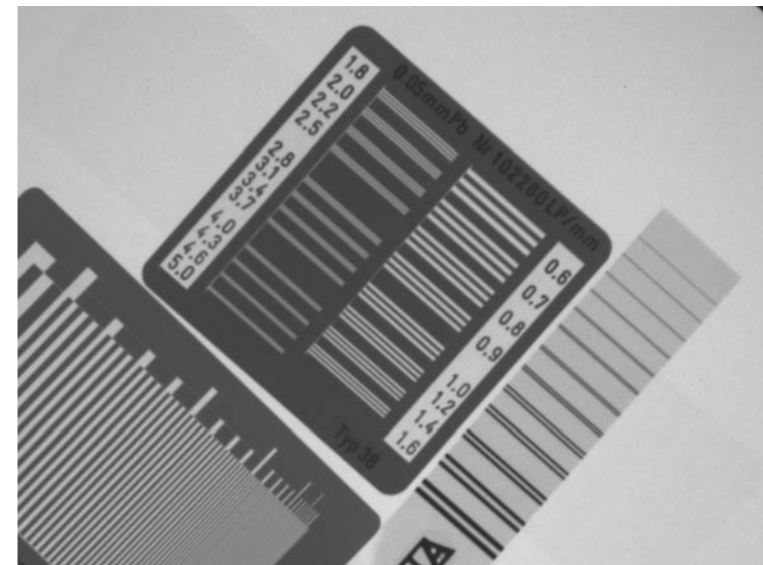


Image quality indicator (IQI) at Zoom 1:

- Pt-Duplex wire (EN 462-5): D8
- Line pair pattern: 2.5 - 2.8 Lp/mm

Remark:
Quality of illustration differs from original image quality!

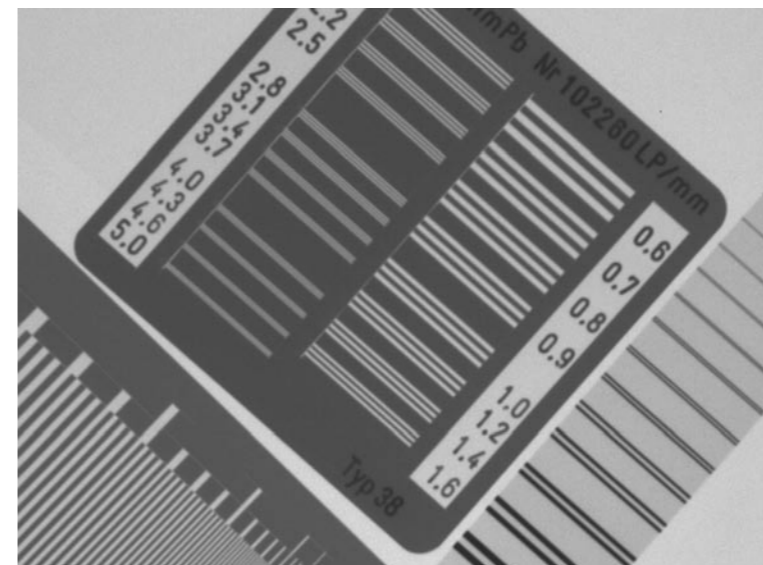


Image quality indicator (IQI) at Zoom 2:

- Pt-Duplex wire (EN 462-5): D9
- Line pair pattern: 3.4 Lp/mm

Remark:
Quality of illustration differs from original image quality!